

Title (en)

Thermoelectric element, module and device, in particular intended for generating an electric current in an automobile

Title (de)

Element, Modul und thermoelektrische Vorrichtung, insbesondere zur Stromerzeugung in einem Kraftfahrzeug

Title (fr)

Élément, module et dispositif thermo électrique, notamment destinés à générer un courant électrique dans un véhicule automobile

Publication

**EP 2541634 A1 20130102 (FR)**

Application

**EP 12173478 A 20120625**

Priority

FR 1155879 A 20110630

Abstract (en)

The element (3) has a base material providing thermoelectric features to the element. A doping material modifies characteristics of the element made by the base material, where the element provides a doping level that increases from two faces (4a, 4b), and the doping level is defined as proportion of doping material per unit volume. Multiple layers (50, 52, 54) are superimposed between the faces, where the doping level is constant in each layer and varied from one of the layers to the other layer. The two faces are provided with different surfaces. The layers are arranged concentrically. Independent claims are also included for the following: (1) a method for manufacturing a thermoelectric element (2) a thermoelectric element module.

Abstract (fr)

L'invention concerne un élément thermo électrique (3) permettant la génération d'un courant électrique à partir d'un gradient de température appliqué entre deux de ses faces (4a, 4b), ledit élément (3) comprenant un matériau de base, apportant audit élément ses caractéristiques thermo électrique, et un matériau de dopage, apte à modifier les caractéristiques apportées audit élément par le matériau de base. Selon l'invention, ledit élément présente un taux de dopage croissant entre lesdites deux faces (4a, 4b), le taux de dopage étant défini comme la proportion de matériau de dopage par unité de volume.

IPC 8 full level

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CPC (source: EP)

**H10N 10/17** (2023.02); **H10N 10/857** (2023.02)

Citation (search report)

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Designated contracting state (EPC)

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Designated extension state (EPC)

BA ME

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